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EXAMINER	
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ART UNIT	PAPER NUMBER
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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 10/047,670
Filing Date: January 15, 2002
Appellant(s): KOHLER ET AL.

Jeffery N. Fairchild
For Appellant(s)

EXAMINER'S ANSWER

This is in response to the appeal brief filed January 25, 2006 appealing from the Office action mailed August 23, 2005.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

No amendment after final has been filed.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

The following is a listing of the evidence (e.g., patents, publications, Official Notice, and admitted prior art) relied upon in the rejection of claims under appeal.

2,134,719	KOCHER	11-1938
2,134,719	BROGAN	12-1975
4,146,254	TURNER ET AL.	3-1979

4,945,983	DALO	8-1990
5,062,476	RYAN ET AL.	11-1991
5,105,877	ANDO	4-1992

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 5, 8, 11 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kocher, Brogan or Turner et al in view of Dalo et al, Ryan et al or Ando.

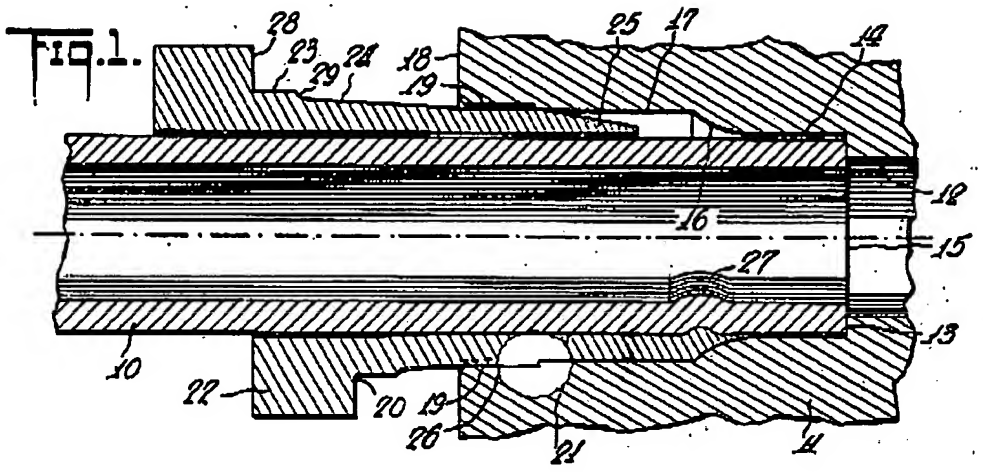
Kocher (Figure 1 on the following page) discloses a device comprising

a tube 10;

a cap 22 concentrically receiving the tube and having a larger tube facing side periphery 26 than at an opposite end 25;

a tank 11 receiving the cap and having a remote port 12, a cavity with a stepped wall including a first section 19 snugly receiving the cap tube facing side 26, a second section 13 to abut tube end 15, and intermediate section (transition or shoulder between first section 19 and bore 17, circled in Figure 1 on the following page) abutting the cap between the cap tube facing side 26 and the opposite end 25;

but does not disclose a flattened tube in a heat exchanger.



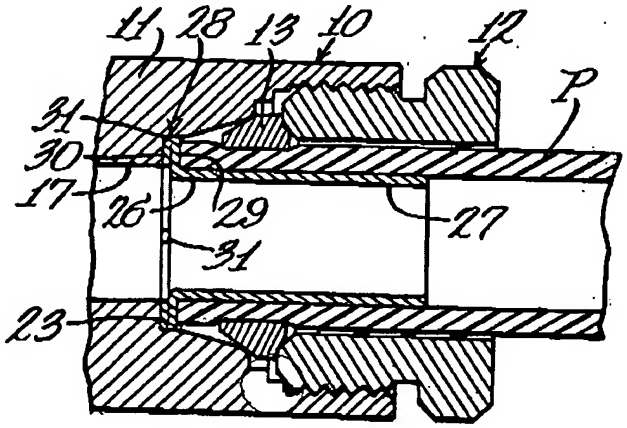
Brogan discloses a device comprising

a tube ***P***;

a cap 12 concentrically receiving the tube and having a larger tube facing side periphery (right side) than at an opposite end (left side);

a tank 11 receiving the cap and having a remote port 17, a cavity with a stepped wall including a first section (threaded) snugly receiving the cap tube facing side (right side), a second section 23 to abut tube end ***P***, and intermediate section (as shown circled below) abutting the cap between the cap tube facing side and the opposite end;

but does not disclose a flattened tube in a heat exchanger.



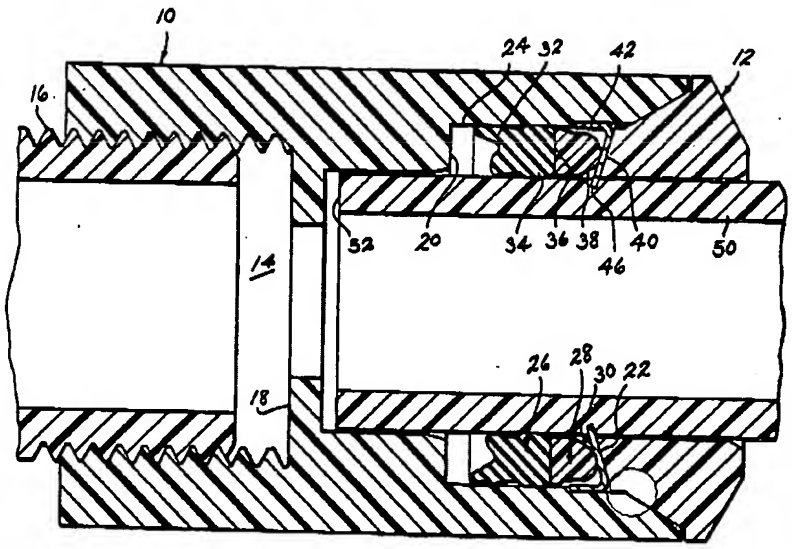
Turner et al discloses a device comprising

a tube 50;

a cap 12 concentrically receiving the tube and having a larger tube facing side periphery (right side) than at an opposite end (left side);

a tank 11 receiving the cap and having a remote port 14, a cavity with a stepped wall including a first section snugly receiving the cap tube facing side (right side), a second section 18 to abut tube end 52, and intermediate section (as shown circled below) abutting the cap between the cap tube facing side and the opposite end;

but does not disclose a flattened tube in a heat exchanger.



Dalo et al discloses a heat exchanger comprising a fluid coupling having a combined cap and tank assembly 10 connected to tube 14, wherein the tube may have a flat or round cross-section (column 1, lines 19-20) for the purpose of achieving desired flow and/or internal pressure requirements.

Ryan et al discloses a heat exchanger comprising a fluid coupling having a cap 26 and tank 14 connected to tube 18, wherein the tube may have a flat or round cross-section (column 5, lines 1-5) for the purpose of achieving desired flow and/or internal pressure requirements.

Ando discloses a heat exchanger comprising a fluid coupling having a combined cap and tank assembly 4 connected to tube 2, wherein the tube may have a flat or round cross-section (column 4, lines 36-40) for the purpose of achieving desired flow and/or internal pressure requirements.

Since Kocher, Brogan or Turner et al and Dalo et al, Ryan et al or Ando are both from the same field of endeavor and/or analogous art, the purpose disclosed by Dalo et al, Ryan et al or Ando would have been recognized in the pertinent art of Kocher, Brogan or Turner et al.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ in Kocher, Brogan or Turner et al a heat exchanger tube having a flat or round cross-section for the purpose of achieving desired flow and/or internal pressure requirements as recognized by Dalo et al, Ryan et al or Ando. As demonstrated by Dalo et al, Ryan et al and Ando, flat and round tubes are mere alternates of one another.

Regarding claims 11 and 13, the flattened or oval tubes of Dalo et al, Ryan et al or Ando would mate with a cavity having a corresponding shape in the devices of Kocher, Brogan or Turner et al.

(10) Response to Argument

With respect to the preamble, the term "heat exchanger" does not set forth any structural limitation, where it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ2d 1647 (1987). In fact, any structure having a temperature difference relative to an external or internal fluid can be read as a "heat exchanger."

The position that fluid couplings employed in a removable and a brazed environment cannot be combined is not persuasive. There is no structural difference in the two types, in that, a tube is fitted with an adapting structure (i.e. cap) to mate with another structure (i.e. tank). It is clear to that one of ordinary skill in the art would recognize the structures of the prior art of record are clearly analogous and both relate to fluid couplings. Whether one type is required to be removable or semi-permanent by brazing is of no patentable moment in this instance. Furthermore, the claims do not recite whether the structures are permanently bonded, i.e. brazed, or removably coupled.

Furthermore, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, the novelty of the instant invention is not solely based on the heat exchanger structure, rather the structure providing fluid coupling of components to define a heat exchanger.

In response to appellants' argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the secondary references of Dalo et al, Ryan et al or Ando teach circular tubes and flattened tubes are obvious alternates of one another. There is no novelty in employing a known tube cross-section with another known tube cross-section, especially when the prior art explicitly discloses the obvious substitutions. The modification is nothing more than a mere change in shape of the tube, which does not produce any new and/or unexpected results. Refer to the grounds of rejection and the specific citations with respect to Dalo et al, Ryan et al and Ando stating circular tubes and flattened tubes are obvious alternates of one another in fluid couplings.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Leonard R. Leo

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